

FIGURE 1A

FIGURE 1A

206210 64565001

MSP Unmethylated 223 BP

GT TATGTTATGT TTGTTGTATG

Forward UM 22 BP MT 56

T AAAATCCACC AACACAATCA

Reverse UM 21 BP MT 56

MSP Unmethylated 223 BP

TAC GTGTTATGTT CCATCC

F M 19 BP MT 58

CCCAATTAATCTACCC TAAAACCC

R M 20 BP MT 56

MSP External primers 287 BP

TATTT TTTGTAAGA TAGTTTTCAT

EXT.F

TACAACTTCTAAAAATAACCC

EXT.R

FIGURE 1B

SEQUENCE LOGO

Twist Promoter: Accn No. AC003986
Promoter Region analyzed: nts -51145 TO -51750

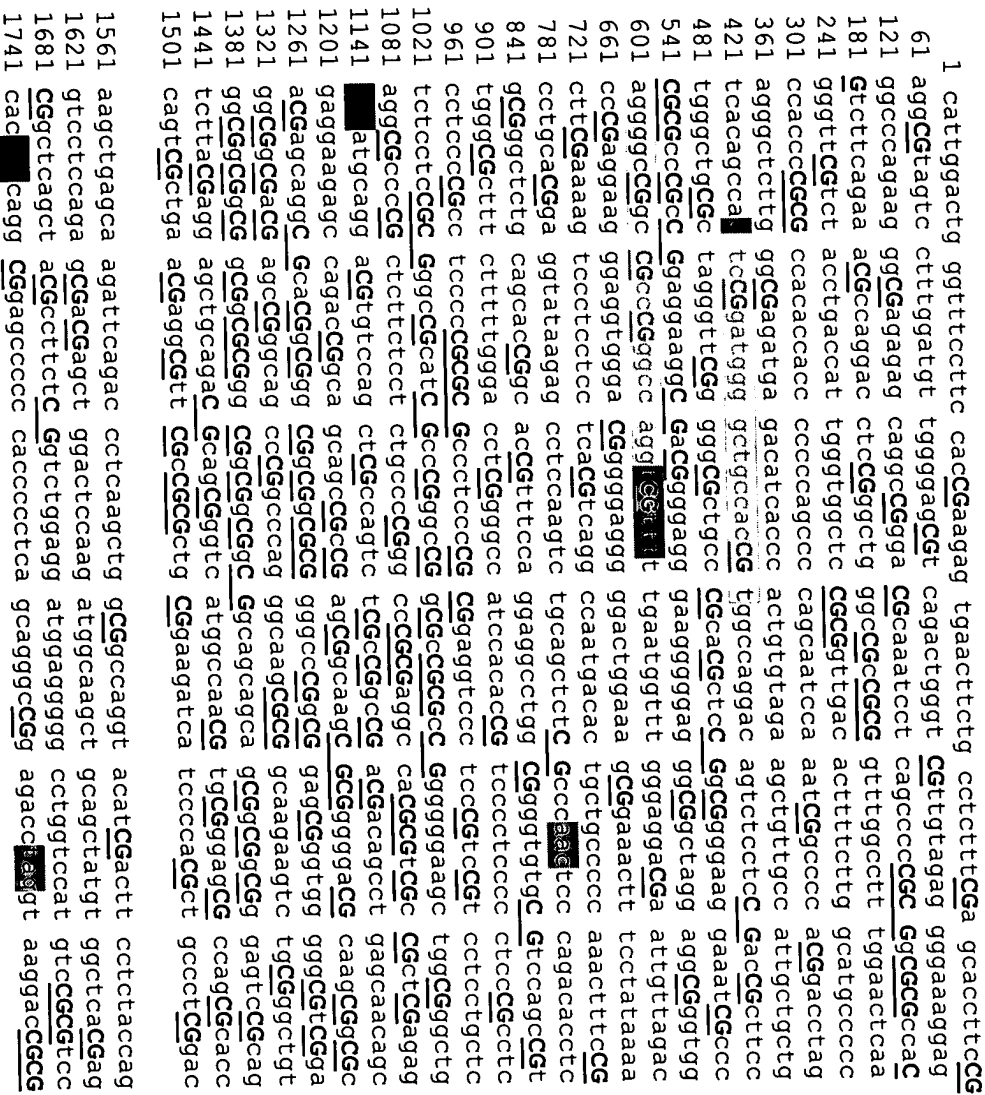


FIGURE 2A – FIGURE 2B

Unmethylated 193 BP

tt TGgatggtc tgtattTG FUM (3) 21 BP AT 58

c ctaccCAa CAacc RUM (3) 20 BP AT 60

Methylated 200 BP

ctaccCAa CAacc RUM (3) 20 BP AT 60

FM (5) 20 BP AT 58

ctaccCAa CAacc RUM (3) 20 BP AT 60

FM (5) 20 BP AT 58

External primers 371 BP

Gagatgagatattattattgtg EXT F

aacaacaatatcattaacctaac EXT R

10

RAR beta promoter, MSP primers ACCN NO. AF157483
Promoter region analyzed: nt -196 to nt -357

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1  gtacacagaag tagtagaag tgaagctgtc agaggcagga gggtctatc ttgccaag
61  ggaggaccag aattcccat gCGagctgt tgaagactg gatgCGaaga aCGCGaCGa
121  agg gttgtctg gacCGtCGg gtagatCC GgaCGcatt CGgaaggtt CGgaaggtt
181  ttgcaagca ttacttga agagaactt ggatcttc tggaaaccc cCGccCGc
241  tgaattgCC Gagcaagcct ggaaatgca atgaaacac agagcaacc ctctagaaga
301  ctCGtcccaa gcccccatc tccactcct cccctCGag tglacaacc ctgctCGtc
361  tgcagagca aatcatcag gtaccatct ggggtcagCG cctgtaggg atgtaaaggc
421  ttttcCGca gaaglatca gaagaat attacact gtcaacCGaga taagaactgt
481  gtatttaata aagtcaccag gaatCGatgc caatactgtC Gactccagaa gtgcttga
541  gtgggaatgt ccaagaatc tgtcaggaat gacaggaaca agaaaaagaa ggaagctCG
601  aagcaagaat gcacagagag ctatgaatg acagctgagt tgaCGatct cacagagaag
661  atCGaanaag ctcaaccaga aacttcct tcaactctgc agctggtaa atacaccaCG
721  aattcagtgt ctgaaccatCG agtCGactg gacctgggc tctggacaa attcagtga
781  ctggccacca agtgcattat taagatCGtg gatttgcata aaCGtctgcc tggttcact
841  ggttgacca tCGcagacca aattaacctg ctgaagCGg cctgcctgga catcctgat
901  cttagaattt gcaccaggtg taaccagaa caagacacca tgacttctc agaCGgcct
961  accctaattC Gaactcagat gcacaatgct gatttgtc ctctgactga ccttgttc
1021 acccttgcca accagctcct gcccttgaa atgtatgaca cagaacag cctctcagt
1081 gccatctgct taatcttgg agacCGccag gaccttggg aacCGaaca agtagataag
1141 ctacaagaac cattgttga agcactaaa attatatca gaaaaagaCG acccagcaag
1201 cctcacatgt ttccaagat cttaatgaa atcacagatc tCGtagcat cagtgtaaa
1261 ggtgcagagC Gtgtaatlac ctgaaatg gaattctgt gatcaatgcc acctcatt
1321 caagaatgc tggagaatc tgaagacat gaaccttga cccaagttc aagtggaa
1381 acagcagagc acagtcttag catctcacc agctcagtgt aaaaacagtgt gtcagtca
1441 tcaccactCG tgcataaga ca

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FIGURE 3A

Unmethylated 163 BP

ggattgg gatgtTGaga aTGT FUM 21 BP AT 60

C Aaccatcca accAaaCAa RUM 21 BP AT 60

Methylated 142 BP

FM(2) 19 BP AT 60

RM(2) 19 BP AT 58

External primers 266 BP

gtaggagggtttattt ttgtt EXT (2) F

aattacattttccaactactc EXT 4 (2)

FIGURE 3B

PROSITE 6.565001

Homo sapiens serine protease-like protease (nes1) mRNA, complete cds ACCESSION AF024605
(SEQ ID NO:94)

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1 accacgcggca gaaccacggc agggcacagc cactctggg tccccctcc ccttcctatc
61 ggcgactccc agatcctggc catgagagc ccgcactcc acctctccg cgcctctggc
121 gcccgggctc tggcgaagc gctgcggctg ctgatggcg aactctggc cgcagagggc
181 gcgctgtccc cccaaaacga cagcgccttg gaccccgaa cctatggcg cccgtgcggc
241 cgcggtcgc agccctggca gttctcgctc ttaacggcc tctcgltcca ctgcgcgggt
301 gtccctgttg accagagttg gttgtcgacg gccgcgcact gcgaaacaa gccactgttg
361 gctcgaagtag gggatgatca cctgtcgctt ctacaggcg agcagctccg ccgagcagct
421 cgctctgttg tccatcccaa gtaccaccag ggtcagggcc ccactctgcc aagcggaacg
481 gatgagcacg atctcatgtt gctaagctg gccagggccc tagtgcggg gccccgcgtc
541 cgggccctgc agcttcccta ccgctgtgct cagcccgag accagtgcca ggtgtgtgc
601 tggggcacca cggccggccc gagagtgaag tacaacaagg gcctgacct ctccagcatt
661 actatcctga gccctaaga gtgtgagtc ttctaccctg gcgtgtcac caacaacatg
721 atatgtgtg gactggaccg ggccacggac ccttggcaga gtgactcttg agggccctg
781 gtctgtgacg agaccctcca aggcatacctc tcgttgggtg ttaccctg tggcttgcc
841 cagcatccag ctgtctacac ccagatctgc aaatacatgt cctgatacaa taagtacata
901 cgtccaact gatccagatg ctacgtcca gctgatacag atgttatgt cctgtgatac
961 cagatgcccc gaggtccat cgtccatcct ctccctccc agtcgctga acttccct
1021 tgtctgcat gtccaacct ctgcgcctt ccacacctt aaacatctc ccttcacct
1081 catccccca cctatccca ttctctgct gtaactgaag tgaatgcag gaagtgttg
1141 caaagttta ttccagagaa gccaggaagc cgtcatcac ccagccttg agagcagtta
1201 ctgggtcac ccaactgac ttctctgac actcccgct gttgacttt gggaagcca
1261 atggccctt ctgaacctca gtttctcat ctgcaaatg ggaacaatga cgtgcctacc
1321 tcttagacat gttgtgagga gactatgata taacatgtgt atgtaaatc tcatgtgatt
1381 gtcatgttaag gcttaacaca gtgggtgtgt agttctgact aaagttacc tgttgtctg
1441 aaaaaaaaaa aaaa

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FIGURE 4A

HOX A5 Promoter 3' to 5' AC004080 (SEQ ID NO:96)

16321 accaagagag actgugagag ggcgcg caagag aagagagggg ggacccg agag cgcgcgtcccc
16381 gcgcgtcgcgc ggattagaa aaagctggc ttaccatga ctatgtgca gcttgcgc gcgcac gcgc
16441 ccaagggtag atctggggt gggcgcgggcgc cgcgcgggtc cgcgcgcctct gcgcac gcgc
16501 ctgctcgc ctggcaaggg cgtccctctc ggtcccgac gcgcgtgcaa ccccctct
16561 gctgctgatg tggtgctgc cgcgcgtcgcgc cgaagccgcgc ctggaagtgc ttaggaagt
16621 ttcccccgcgc tggtgctgt cgcctgcgcgc cgaagggggcc acgcgcgagc agggcaagcgc
16681 atcgcgctga ggagagtg cgcgcgtggc cgcctggctg taactgggt ggcgcgagcgc
16741 cgcgcctggcgc ctggcagcgc agctgcgcgc gcgcctcgcgc gaagccaaagt ggcgcgagcc
16801 cgaagcgcgcgc acgcctgagat ccatgccat gtagccgtag ccgtaacctgc cgaagtgc
16861 gctcgcgcgcgc tccttgat gctcgcctcac ggaactatga tctccataat tatgcaactg
16921 gtagtcgcgcgc ccatttgat agccgacccga aatgagtt acaaaataag agct ttg
16981 tttttgata tggtgctg attgtgct cgcgcgtcgc tggtgcgtc tagccacct
17041 gcacaattta tgatgaatga tggaatgac tggaacatgt actgtgtcc ctccta cgtta
17101 ggcaccctaaa tatgggtga gaactcgaat cactgtctt tggtgtccag tcgtaaatcc
17161 tgctgatga cctctagag taactcgtg caactaag ggagttygt caagccgact
17221 gggttggcgc gcgcgcgcgcgc ggcgcgcgtgc cgcgcgcagt tcgcgcgcgc gcgcgcgcgc
17281 cgaagccgcac cgcctgagag caaggctcat cgcgcgcagt ccgaacgcgcgc gctgcaaggg
17341 cgcgcgtcga attgaggtta caagccatga tgcaaaaat attgcatctc cctcgcgcgc
17401 ccattagat gtaccaattg ttagccgc agctgcgc cgcgcgcgcgcgc gcgcgcgcgcgc
17461 agaggtatg

FIGURE 5A

FIGURE 5B

UnMethylated 213 BP

TTGgtTTGg aagtgtgTTG FM 18 BP AT 56

gtatTTgtg attTGaaagtT Gtatt

aataC AacttCAaat caCAtac RM 22 BP AT 56

TTGgtTTGg aagtgtgTTG FM 18 BP AT 56

gtatTTgtg attTGaaagtT Gtatt FM 18 BP AT 58

aataC AacttCAaat caCAtac RM 20 BP AT 56

TTGgtTTGg aagtgtgTTG FM 18 BP AT 56

FIGURE 5C

Homo sapiens 14-3-3 sigma protein promoter and gene, complete cds.
ACCESSION No. AF029081 (SEQ ID NO:102)

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1  ggatcccagc  ctgcccctcc  actctctcc  caagccaggt  cccggcatgg  gtgggttatg
61  ctcatgtcgg  caatacttga  aacgggttta  ttaatgctgg  gtattltgca  caattttata
121  gacctctttt  ctacatagtc  tttttaaat  ggaagagaaa  aatgtcagcc  acattactgt
181  ctgtgtatg  ccaggtgaag  gttatcaga  aggcctggtg  gtttaataa  gtttatcca
241  agagaccctc  tggctggaa  agtgaagat  gtgtgtgcat  gtgtgtgtgt  gttcatgtgt
301  gccctgtatg  aatgtggctg  gctccagat  cccctgggct  gccccctgcc  ccattcccct
361  tgaatatcag  aagcaactct  agccaagggg  acagggggca  cgtgcaactgg  tcacgagaaa
421  accctgggct  cccaactggg  ctacggccag  cctccatctt  ttcctcttc  tatgacttc
481  agacagccag  tgtctgggga  ctctgccact  ctaccccag  ccctaacccac  cagcccccaag
541  gtgagcctc  cagctyggac  ctgccagac  agctgagcc  tgggcgttgt  ggttgggtg
601  atggtctgg  ggaagcggct  ccattcctaca  agccacacc  cctcctctga  gctctgaata
661  tgggacccag  tggcagggag  tggaagacaa  ggtgtttctg  ccaaacggga  cctccatcca
721  gaaaaaagga  agaagttgca  ggttgggcca  agagggcaagt  gaaggttggc  ctgagttcgg
781  gccggaact  cagagatgt  ttctcctctg  ctggagactg  tagtttcta  tcaaataga
841  tattgtcca  ccattcccct  ccttggccct  tcaagtggc  tgaagccttg  gaaagtgaca
901  taggaagtc  ccagatcttg  cccttctcac  tccagagct  agtgtcaca  gacagctggg
961  aatggcagcc  acagaggttc  cctctgaga  aacagcttca  ccccaagctc  agggccctgg
1021  gcatcactgc  agtggccctg  ggaggtgag  aagaagctgg  ctagaaggag  gggctccac
1081  ctaccttta  tttaagccag  tatctttgt  tcctgcttgt  aataaaact  cagttataa
1141  gatttgctt  gctttgttt  ggttttgtt  tgctttcct  ttgtgaggc  cccaactggg
1201  agccctctgt  tctttcagac  aaatttgtt  ctttcctgg  gagactgtga  gaagcaggc
1261  agcccagtga  tctgtctaca  ttctccctca  cctgctgga  gctctgtccg  ctgaggaag
1321  agcagagag  gctgcggctg  agcccccatg  ggcacgtgaa  aagagggcat  cctgtccct
1381  cttgtcccc  tccacccttc  cctgctcag  gggcttgag  accccaatt  ctcttccct
1441  actgccttc  cactccgac  cccaatgagt  gccacgtaa  gaaatgttt  gagacagtag
1501  atccagttt  gagagccgga  gcttccctgg  ctaccactc  caactgggc  accagggccc
1561  agccagacaa  ctcataaac  tggcccact  ctctgtatc  tccctcagga  ggaacacctgt
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FIGURE 6A

208210° 6'56.500T

1621 caggattttg ccatctcctg cacagcctga ggggagctaa caggcctctt tgcagaggt
1681 tagctgttaa gaccgtttct tccctgtcgg ccagcactgc ccgtccctt ccacacacca
1741 tctcatcctc atcgcatgcc tcggcaaccc catgagccc gtccatctgt ctgtgtgtg
1801 gtgcggtgtg tgtgtgtgtg gtgtagagt ctccagggac tccccgttaa gcagaaggt
1861 cgggatatag ggcgaagcta aaagcccagc cccattgtg actgaggaag taagtccg
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1981 cctgccctga ggtgcttggg tctgtctgg tgggttctg gtatgcagg gccaccggtc
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2101 tctctcctgc ttcaattgct gctgcctaa ccttggccct tctctgggc agagcaggt
2161 gctgtggcag caacctctcc caccacggg cccctgcagg ccgcctccct cctccaggc
2221 ctgtctaaccc tctctcttct ccttcttgc tgtcctggcg ggatctcca gtgtgtcgg
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2341 gccagggacc cggcacctcc acctgcctaa ccttggccc atctgcacc atcttgcct
2401 acaggtctg cccccagcc tggccggcct gtgtgtctc taggaccca taggggcag
2461 gggctggcct ctttggccca ttcccgctcc atggcggcca gagtgtagaa agccataag
2521 caagcagcca tcagcacaaat aatgtgactc taagtata tgctccctt ctccctcact
2581 gacttccct tcccgattt gtgagtgtc aagactaga atctggcct agagcctgc
2641 cctcacccc ctcatagcag gcatagccat agtcaagccc agcagttc ctcaagagt
2701 gtctgggtg ttgatgtgg acggtctgtc caactccac cccaacctt ccacagagt
2761 actgcttga tactgttccc acggtctgtc caactccac cccaacctt ccacagagt
2821 agttagatg tagggaggt gcgtgccgc ttgtctag gcactgagg accaagctag
2881 ccgtgcacag ccccatcac ctcaagggcg taaagaaag agctgagcca agyaaatca
2941 gctgagcca gggctgggg ttgccatac attgctgtc tgytggcgc ttacttgg
3001 aaataaat tccctcttc ttgccatac attgctgtc tgytggcgc ttacttgg
3061 gggccaggga tgggacctgc agtgggcgtg tggaacatat ggtcccccct cgtcccagc
3121 ttcttccag ctggccagt ctgtcttga tcccttccac tctggccctc cagaactctt ggtctcaat
3181 cacaggaaaa gtgtctgaca tcccttccac tctggccctc cagaactctt ggtctcaat
3241 ccagacacca cccagccta gctgacctct ggtatctgat aggtccaggt gcaggtgag
3301 acagaggtt taactcagt ttgggactgc cataccatg aactgagccc agcccaggt
3361 aacgatctca tggaaactc tctctccca gtgtctgac tacatcaaga tacacacatg
3421 tgcatacact gtactatggg ctaaaaaaat acgtaccgt accgttcagc aagggcttgc

FIGURE 6B

3481 cgagtcgccg gcccatcttc tcatcttaac ctgtgaggag gatgatgtca gccttttac
 3541 agatgagga actgagactc aagaaagaa caggagctgc ccaagttcac ccagctggca
 3601 aagcagcaaa tcccagatcg gaacctgac tctgccccga gctctgagcc atctgcacta
 3661 cccaaggaat gaatacagcg gtgggaggat gagatcttgg agaacccta aaattagaga
 3721 atgtcatagc cagtagaggg cttagagltg atctggcca gcctccttgt ttactgatg
 3781 gagaatltga agcccaaggg caggaaagga cctgcccag gccttataac agagctggga
 3841 tgcagtccca cacttgacc tcaatccat ctcttccat aaatctgca ctgtcttag
 3901 actgactggt ttatagatgt ggatactcta aacagcagtg cctcaagag aaaagaatc
 3961 agaactacga atcaacttaa agtaatgtaa gctactctgg gcacactgcc tatgggtcg
 4021 ccctgtcca caaggagcca caaataat taataaat taatalccct tcccaaggt
 4081 aaccagtaaa gtaagctctt ggctaggtaa ctgactctt gtacaact agccagtgg
 4141 aaaagtgct agagcttcct ctggccacct gttaatltg atcaatccaa gacagaaca
 4201 ttcttagga agtcttcttct agaattacc tgggtccct cccaactgcta tcagagccct
 4261 gtccctgtc ctcagtggag gtagagagca aatgltgct gcttcttca tcacaacct
 4321 tcaagccta ttattaccag ctaagaagga ttggttact atgggccaga gccctgagc
 4381 ctgctgtag aatgtagtct gtacagaggg gtgggaggt agcaggcaga atgaggaag
 4441 ccccttgag ctgcaacccc agctcctgtc ctgtgactc agacagctga ctgtgagct
 4501 ccatgccctg ccagggcctg ctgcctcctg cccgtctgag ctccctgaact tgggaatgg
 4561 aggcccaagag gcaagggag gtaacctaga caggaactga gtcagatca acaggcaga
 4621 gcgggcagga ggtatcaggc agcctggctc ccagatgcac ccttgagctc cagcaggga
 4681 ggagtaggaa tgaagggtct tccttgccct tgcctatggc tatgcggagg gcgtgaacca
 4741 ccaccagtc ctctgctta agtggcggga agcaaatgt cccctccctg actcagctc
 4801 caaagttcct gggcctgcct tccaggttcc cagttcctg ggaatccag cttccccag
 4861 gacttggga agccccgct ggaatgactag tacaatgaa gggccctgag gttccagac
 4921 ctgctgaggt cacagaata tccttagatca agctgtcca acccagggcc cacagctgc
 4981 atgtggcca gaatgctt gaatgcagcc caacacaat tagtaactt tcttaaaca
 5041 ttatgagatt ttttgcaaa tttttttt tttttagct catcagltat tggtagtgtt
 5101 ggtatatltt atgttgccc caagacaatt ctccaatgt ggccaggga agccaaaaga
 5161 ttggacacgc ctgtcctaga tggagaggaa ggaggcagtg ctgagcacat ctggccatlc

FIGURE 6C

5221 atccatctgg agagagaag ctatggcaa actgcttctt ctcccctgta gacaccagc
5281 tgggaagtc tggccttgg taagtcctgg ctggggtcc ttccctcatl cacagaacct
5341 aactctatgt tagtgccttg tgagtatatg ttgatacata taaagtgac gggatlttt
5401 cacatgataa taatagttgt catctggccg ggcattggtgg ctatgcta taattcagc
5461 actttggaag gctgagcgag gtgatacact tgaagtcagc tgttcgagac cagcctggcc
5521 aacatggtga aaccacatct ctacttaaaa aaaaaaaaaa tacaanaat agctgggtgt
5581 ggtggtgcac cctgtaatc ccagctactc gggaggtga ggcagagaa tcaactgaac
5641 ccaggaagtg gaggttcag tgaagtgaga ttgtgccact acactccagc ctgggtgaca
5701 agagcgaaac tccgtctcaa aaaaaagaa aataataata ataagttg ccattccattc
5761 tactgtgct tccattaact cgtgtaatcc tcacaagttcc catttatag ttacaggaac
5821 tgaagctcac agagctlaaa tcaattggcc aaggccacaa acagctataa gaattacat
5881 tagcagtcct gattccaaag atactagctt attctgtatc tcatagacaa acaatacata
5941 ttcaactttt tgtgttgtt ttgtttgag acggaagctt gctctgtcac ccagctgga
6001 gtgcagtygc gccatctcgg ctcaactgcaa cgtccgcctc ccggttcaa gcgattctcc
6061 tggcctcagcc tcccgaagtag ctgggaactac aggcattgyc caccatgccc ggtcaattt
6121 ttgtatlttt agtagagaca ggttttctt gggttagcca gaatgcttc gatctcctga
6181 cctgtgtatc caccacctc agcctcccaa agtgcctgaga tgacagycgt gagccaccgc
6241 gtccgaacct tattcaatat ttataattg gagagaataa gaaatcaaa agggccaagt
6301 gtagtgactc acacctgtaa tcccagcact ttgggaagcc aagccagagag gatgttga
6361 acccagaagt tcgagaccag cctgggcaac atgtgagac cctgtccta caaaaatac
6421 aaaaattagc tgggcgttgt ggtgagcacc ttattcttag gaagctgag caggaagatc
6481 acctgaagcc aaggaagttg agactgcagt gagctgtgat cataccactg tactcagcc
6541 tggacatcag agtaagaccc tatctctaaa aaggaattg agaagaaaga aaatcaag
6601 gaagcaaat cactcaactc cactaccta agataccctc tagaagttgg tatttaagt
6661 tggttcctat tgtttctgt gtcagttctc tgattgagc aaaaactttg ggaagtcata
6721 cttaaatcc ccttacttc cttagaac cttagcatt agccagaca tgtccctact
6781 cctccttgtg gcaagagaa ggaatcgttc tttagtccc agattcttg cctaagcctc
6841 cctccagag ggaagatgag tgttcagaca ctcaagtag ctgggggaga cacagcctg
6901 tgaattatc ctggtcaac tattaggtcg gcagaatccc agtgaagga gccctacctc
6961 tgagcccat ctaagcttg gctatgggtg gggcagataa gcaaggaaatcc atccctatag

FIGURE 6D

7021 gctcaatgac aacaccctta ggtgaactc ttgatgaac ttgaggccag ggtccggca
7081 agcagggaaa gaacgttggc aacagagtc tccatctctg aggactctgc cagggtcag
7141 agatggggca atgtcaaaa ggaaggagaca ggcagggcac agtggctcat gcccatac
7201 ccagcacttt gggaggtga ggcaggagga tcgcttgagc ccaaggattt gagactgcc
7261 tgggcaatgt agtagatct gctcttatt taataaaaaa aaaaaggaaa gaacaqtaa
7321 actcttga aacaggtgg gggaggcatc acgtagctg aattgtgcc ccaataaca
7381 gaatgtatg tgtcactgcc acctccctt ctcatctc tcttcccca ggttgttagc
7441 gtccccctgg gggatcaaac tggactgctt cccagctca gacagagagc agtctgaqtc
7501 aggcaggaaa gtggacagc cggggagctg gacccacc tctgtagcc ccgttgtac
7561 ctgatggcat gtggcttga gaggcaggt gacctggct ggaaggaaa atgtgtagt gatggaaat
7621 ctcaacaag tggcaacag ccaccaact gaaaggaa atgtgtagt tcagagctg
7681 gtgtccaaca aacctactgg gtgactaat acaaggctg ggtggagct tcaggagct
7741 ctgtttaac attcattaa gcggactct gaaagctgcc acctggcat tctggagct
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7921 gggagaaaag ctaaggag aggttcaga aaggagttc agggaattgg tggctatgt
7981 acttgagca aatcaccc ctcttgaga cttagtltc ccactctat ggtcctgtt
8041 gtgtcacaga gacatgttgg ggtataat cgatctgat atgaaatgc ttggaaact
8101 ccatggcct acctaacat gattatcct cactgaacc aagggggaa gttacctgc
8161 aggattaga accccatcct cctgaacct tatggctct gtcgagctg aagcagccag
8221 gggctaagc cagtccttag cccctggaag ggcactgtga aagtgtatct gatttgaaa
8281 gccgttctc gatgtggca gccatgtgat gccagccccg aacaagagg ggcagcctg
8341 agcctgaaa gttggcagtg cagttgggc ccaagccag atttctctg ctgactgtc
8401 tgatgatca cccccacatc ccagcctltt taaccttact gcagagccgg aaaggtgtg
8461 gggaagagag gagagggag ccagccaaaa ggcagggcaa gagcagagga gacacagat
8521 ccttctctg gcctggccac cagttagccc gccggccgc tgtgtgtccc cagagccatg
8581 ccggcatlgt tccagggcag cagttagccc ggcggccgc tgtgtgtccc cagagccatg
8641 gagagagcca gtctgatcca gaaaggcaag ctggcagagc aggccgaag ctatagagc
8701 atggcagcct tcatgaaag cyccgtggag aagggcgag agctctctctg cgaagagcga

FIGURE 6E

8761 aacctgctct cagtagccta taagaacgtg gtggcgcc agaggtctgc ctgaggtg
 8821 ctgtccagta ttgagcagaa aagcaacgag gaggtctcg aggaagaagg gcccgagtg
 8881 cgtgagtacc gggaagaagt ggaagactgag ctccaggcg tgtgcgacac cgtctgggc
 8941 ctgctygaca gccacctcat caaggaaggc gggaacgcc agagccggt cttactctg
 9001 aagatgaag gtgactacta ccgtactct gccgaagtgg ccaccggtga cgacaagaag
 9061 cgcatcattg actcagcccg gtacagctac caggagcca tggacatcag caagaagag
 9121 atgccgcca ccaaccocat ccgctgggc ctggccctga actttcgt cttccactac
 9181 gagatcgcca acagcccgga ggaggccatc tcttgcca agaccactt cgacgaagcc
 9241 atgctgatac tgcacaccct cagcgaagac tctataaag acagaccct catcatgcag
 9301 ctgctgcgag acaacctgac actgtgacg gccgacaacg ccgggaaga gggtggcgag
 9361 gctccccag agccccagag ctgagtgtg ccgccaaccg ccccgccctg cccctccag
 9421 tccccaccc tgcgaagag actagatgg ggtggaggc cccaccctc tccctagc
 9481 gctgtcttg ctccaaagg ctccgtgag agggactgg agactgag ccaactggg
 9541 ctgggatacc cactctctt gcagctgtg agcgaccta accactgtc atgccccac
 9601 ccctgcttc cgcaccgct tcctccgac ccaggaaca ggtacttct cccctctct
 9661 tgcctccctc ctgcccctgc tgccttgat cgtagaatt gagagtgtc ccgcctgtg
 9721 gctgagaact ggaacgtggc agggctgga gatgggttg tgtgtgtg tgtgtgtg
 9781 tgtgtgcg cgcgccagt caagaccgag actgaggaa agcatgtctg ctgggtgta
 9841 ccatgttcc tctcaataa gtccctgt gacactctc ctgtctct tccagttct
 9901 ggcgatggc tgggagtg actgaaact gactagaga ccctgactt ggaactctga
 9961 gtaaggccc tgaactccct agtggctca gtggccgca cgcaagactt tgatccagg
 10021 tgaggccggg gtc

FIGURE 6F

H.sapiens Wilms tumor (WT1) gene promoter. ACCESSION No. X74840
(SEQ ID NO:103)

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1 agcttcagc cccagcccg gccagccagg tacaggagc cggactgca ccggttgctt
61 ccctccgctc gcgcctggc gtcccagct gcgcctgc tgcctctcc tggcgccct
121 gggatttat acgcacctc gaacacgct ccgtccgc ccccgttct tctcctgcc
181 tagggttgt ttccaatag atactactc cttagaaga tccaaaacc aaaccaaacc
241 accccctacc cgcccaaac acctgctctg gggcgcggg gctgccaac agagactaga
301 cgaaggagt cagatttag gaantctcg agtcccaaa gatcgaca ctaactcgc
361 ccctgggc gatggagtt ctccctact cactccttg tcccttaac tggcttcgc
421 ctctgtca atcactgag aaccagatg gtatcctga ccaggccac aggcagtgt
481 cggcggagt gtcacaggag ttaccgctc ctgccgggt tcgtatcaa accctccct
541 tcaccctcc tcccacaact gggcgccagg atgtccgc cgyaatatac gcaagcttg
601 ggcgttggc caagggttt ctccctcct aaactagccg ctgtttccc ggcctaaccg
661 tagaagaat agatatcct cactggaag ggaactaag tgcctgac tccaattta
721 gtaggcggc aaccgttcc gcctggcgca aactcacca agtaacaac tactagcga
781 tcgaatacg ccggtctat aactgtgca actccggcc acccaactga gggagctcg
841 cttcagtc cgaccttg aaccacaaa gggccacctc ttcccaagt gacccaaga
901 tcatggcac tccctaccc gacagltcta gaagcaagag ccagactcaa ggttgcaag
961 caaggtata cgttcttgg aagcttgact gactcttcc tgcgttcc tgaagtccc
1021 gccctctgg agcctactg cccctccctc caaacactc tttagatla acaacccat
1081 ctctactccc accgactcg accctgccg gactcactg ttacctgaac ggaactcca
1141 gtgagacgag gctccacac tggcgaagg caagaaggg agtggggg aggttgtg
1201 cacaccggc agctgagag gcgtgttgg ttgaagaga ggtgtctcc gagaggagc
1261 ctccctcga ccggcctca cccagctgc gagggcgcc ccaaggagca gcgcgcgtg
1321 ctggccggg ctgggctgc tgaagtgaat gagcgccga gcctcctgg tcctcctct
1381 ccccgcgccg ccggccctc ttattgagc ttgggaagc tgagggcagc caggcagctg

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FIGURE 7A

1441 gggtlaagag ttcaagcag cgtccacacc cgtgggtctt ccgaaccg accgtgtc
 1501 cgtccccc ctcccgcc tccctccac ctactatc accaccac ccaccagag
 1561 ccgggacgc agccagcg ccgggcccc gccgtctt cgcgcgac ctgacttc
 1621 tctgttga ggaaccggt tccactgtg tcccgagc ggcgttcag cacagctc
 1681 gctccggcc tgggtgccta cagcagccag agcagcagg agtcgggac ccgggcgca
 1741 tctgggcaa gtaggcgc gccagggca gcgttgaag ttcagggc cggagagcc
 1801 gcggggcgtc cgggtctgag cctcagcaa tgggtccga cgtcgggac ctgaacgcg
 1861 tgctggccgc cgtccctcc ctgggtggc gcggcgctg tgccctgc gtgagcggc
 1921 cggcgcaagt ggcgcggtg ctgacttg cgtcccggt cgttcggt tacggtcgt
 1981 tgggcggccc cgcgcgcga ccgctcgc gccaccccc gccgcgcgc cctactct
 2041 tcatcaaca ggaagccgag tgggcggcg cggagccga cgaagagcag tgctgagcg
 2101 ccttactgt ccaatttcc ggcagttca ctggcacag cggagcctgt cgtacggc
 2161 cctcgttc tctccgccc agcagcggt catccgca ggcagagtg ttctaacg
 2221 cggcctacct gcccaagtgc ctgagagcc agcccgctat tcgcaatcag gtaagtagg
 2281 ccgggagcg cccta

FIGURE 7B

205270-625500T

Estrogen Receptor (ER): Homo sapiens estrogen receptor beta gene, promoter region and partial cds (SEQ ID NO:104) Accession Number AF191544

1 actatagggc aCGGctgtgc GaCGgcccGg gctgtatlg atagatgcat ttcttcacc
61 ctcaacctatc ttttctgcg tgttggtcta tgttgaat tccttcata CGgttccat
121 ttccagagat atctgttaa caagtatata ccaccaatg aagctgattt tttttttt
181 ttttttga gacagagtct CGctctgCG ccaggtctg aatgcagtgg CGCGatcctg
241 gctcaactgca accctcGgct cccatgttca agCGatctc ctgcctcagc ctccgaagta
301 gctgggatta ctggcatgtg ccaccGCGctc cagccaattt ttgtattt agtagaagCG
361 aggtttcacc atgttggtca ggtgtgtctc aaactcctga cctCGtgatc cactgcctc
421 ggcctcccaa agtctgaga ttatagtyt gagccaccat gcctggccat gaagctgatt
481 tttttaacc atcatttaac atttctca taagtytga agyaggaaga gcatatggg
541 actgggtact ttgagagacc ccagagacag agacagggag gctgagattg gcatgtgtc
601 tgtctgcagt atttgccagc Gacacactct ttcCGttccaa actaactct ctgccccaag
661 gaacagguga ctctgcctt caacctgaga gaaaccaagga ctctcagct taatgaaat
721 tggacttagg gtggggcagt ggaagacttt cacagctatt gttagctga tgaagcagat
781 gctctccat cttggagcc tgtcttcatt acctgtggac ctcatctta tcaaccaga
841 gcacactgc Gtctctctat ttggctaa caaccaacag ctgaggttg tactgtaaa
901 cttccctcc aatgcccc cctCGctctc ctctattaga gatctgatac acaacctca
961 aaacccatgt ccctatgcc acctgagtag atggtttgat gattaattag gcacagatgt
1021 gacactgggg ggtctcaca atgucctgtg ggtacatgc tacttcctt ttcatltta
1081 tcagcaacag ctgccttaaa gccaglttaag actgtgtgcc tagtctCGca ccctgggct
1141 cctgtgggg tgggtgaggg gaacaccca ttaagctggg ggaactgggg ctgccaccag
1201 ggggCGGag gggccttCGc CGGagaagag gggtyggcag gtgcctcag CGgagaagg
1261 CGcCGtygc Ggaaggacag gtctcccCGg tggcaattca agtgaattCG aggaagtacc
1321 tggatcttt gatctaaCGC Gaaagacct cccagtgaac tcttgagggc tgaagaacca
1381 ctccctccac ctctaagcca CGgctttgcc actccagggc CGGaggttaC gtttgctgct
1441 ggggatttga caaacccaa gctctctg ttaccaccat ggtctctag aatcagacat
1501 ctgttctgaa tgacacttat gtgagtcagg ggtgaggaC GtgaacctCG aagtgtgtc
1561 ccagactgg ctgtatcagt gtCGgcatcc ccaggaacct ggttgaat gcatacttc
1621 aggccctact ccagacctt taatctgag actggggtg CGgggagCGc catctgtgCG

FIGURE 8A

[illegible]

2

Unmethylated 288 BP

G ggtGTttttttg agatGTGTGg FUM 21 BP AT 60

TG agttgTGATG ggttttg

ccaaacc CAtCAcaact CA RUM 20 BP AT 58

ccaaacc CAtCAcaact CA

ccaaacc CAtCAcaact CA FM 18 BP AT 60

CGggaag taCGgttCG t

ccaaacc CAtCAcaact CA RM 20 BP AT 60

FIGURE 8C

H1N1 nucleotide sequence Genbank Accession No. AY040564 --(SEQ ID NO:120)

FIGURE 9A

HIN-1 SEQUENCING PRIMERS

Forward: 5' [REDACTED] 3', 23 bp, 56 (SEQ ID NO:111)

Reverse: 5'GTGgtttGtTtGtATGtTtGGTG 3' (SEQ ID NO:112)

Reverse: 5' [REDACTED] 3' 60, 26 bp (SEQ ID NO:113)

HIN-1 External primers 209 BP (-213 to -39)

Forward (2): 5'-GTTGTTAAGAGCAAGTTT- 3' (SEQ ID NO:114)

Reverse: 5'-CACCGAACAATACAAACAAACCAC- 3' (SEQ ID NO:115)

Primers for Methylated HIN-1:

Forward: 5'-[REDACTED] 3', 24 bp, 60 (SEQ ID NO:116)

Reverse: 5'-[REDACTED] 3', 22 bp, 62 (SEQ ID NO:117)

Primers for Unmethylated HIN-1:

Forward: 5'-GGTATGGGTTTATGTTGTT-3', 24 bp, 62 (SEQ ID NO:118)

Reverse: 5'-CAAACCTCTATACCAATCCTCA-3', 25 bp, 68 (SEQ ID NO:119)

FIGURE 9B

Nucleotide sequence of RASSF1A promoter (SEQ ID NO:121)

SEQUENCING PRIMERS FOR RASSF1A

External Primers 294 BP

gggaagtcttgaaagtctcaatctgaagt

RASSF1 ext. F

acccactcaaacctacccaccttc

RASSF1 ext. R

Internal MSP Methylated 160 BP

gtctggtcaatctc gctggggcctc

RASSF1 FM (2)

ccacccaccccaataacacctaacgc

RASSF1 RM

Internal MSP Unmethylated 180 BP

ggttgctattGggttgagtg RASSF1 FUM
ctacaacctttacacacaca RASSF1 RUM

FIGURE 10B

Multiplex Methylation-Specific PCR

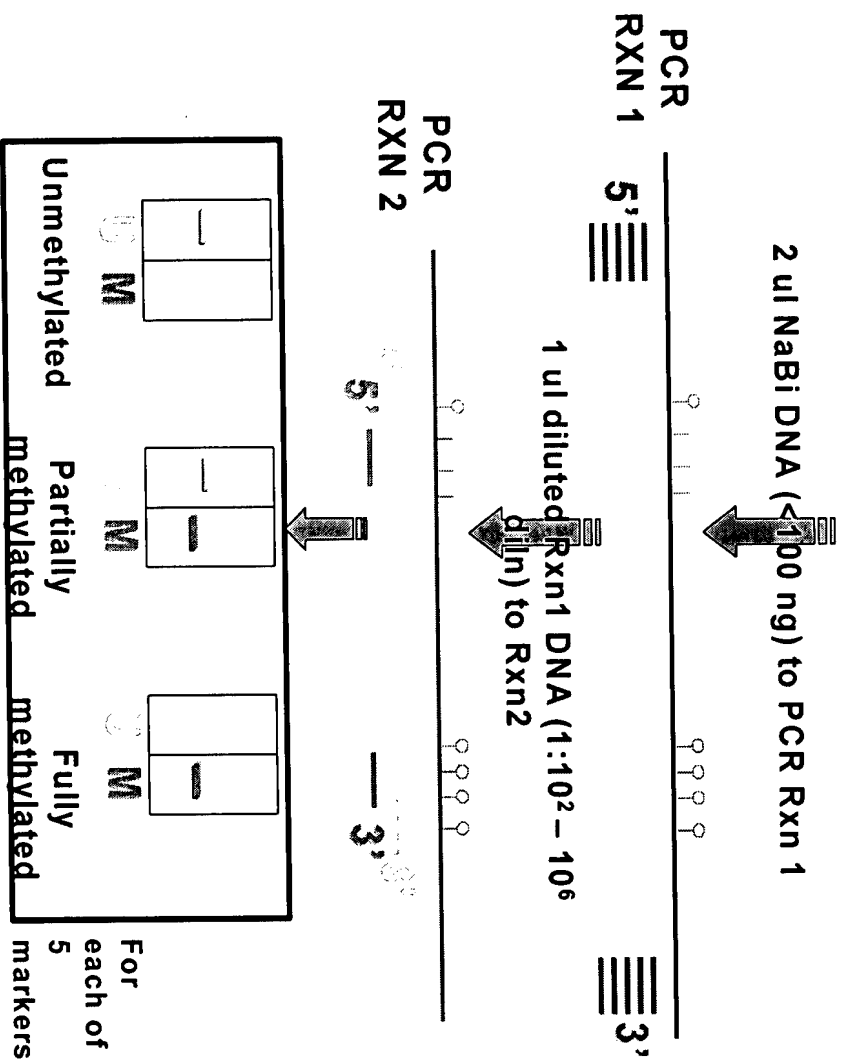


FIGURE 11